

**Remarks/Arguments****Drawings**

5 **Examiner:**

The drawings are objected to because in figure 2, steps 21 and 22, "deactevated" should be "deactivated". In step 23, "actevated" should be "activated".

10 **Response:**

Please amend the present application with the attached replacement sheet for Fig.2. This sheet, which includes Fig.2, replaces the original sheet including Fig.2. In Fig.2, the spelling errors cited by the Examiner have been corrected.

15 No new material has been introduced.

**Specification**

**Examiner:**

20 The disclosure is objected to because of the following informalities: On page 2, line 13, "exits" should be "exists". On page 3, line 10, "form" should be "from". On page 5, lines 16-17, 20, 22, and 27, and on page 6, line 2, "display window 17" should be display window 15".

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**Response:**

Please amend the present application as detailed in the Amendments to the Specification section of this response. Errors cited by the Examiner as well as other minor grammatical errors in these six paragraphs have been corrected. The changes from "APCI" to "ACPI" are supported by Page 7, line 3, Fig.4, and as is well known in the industry.

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No new material has been introduced.

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### Claim Objections

**Examiner:**

Claims 13 and 15 are objected to under 37 CFR 1.75(c),  
as being of improper dependent form for failing to further  
limit the subject matter of a previous claim. Claims 7 and  
10 14 are objected to because of the following informalities :  
Claim 14 is a duplicate of claim 7.

**Response:**

Claims 13 and 15 have been amended to be in proper  
15 dependent form to conform to 37 CFR 1.75(c). Claim 14  
has been amended to depend upon claim 11, eliminating the  
duplication. Reconsideration of claims 7, 13, 14, and 15  
under the cited informalities is respectfully requested.

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### Claim Rejections

**Examiner:**

Claims 1-6, 9, 11-13 and 16 are rejected under 35 U.S.C.  
103(a) as being unpatentable over Swartz et al. 5,514,861  
25 in view of Vaisanen et al. 6,560,443. Swartz et al. does  
not disclose that key switch system cycles between modes  
including IEEE802.11 wireless communication apparatus and  
a bluetooth wireless communication apparatus. Vaisanen et  
al. discloses switching circuitry for switching between  
30 IEEE802.11 and bluetooth wireless communication protocols.  
Also, function keys for user-controlled switching between  
various modes of a computer, such as the ones disclosed

by Swartz, are conventional and thus having a function key for switching between wireless communication modes, including activating IEEE802.11 protocol wireless communication, activating bluetooth protocol wireless communication, and deactivating both would conform with convention use of a function key.

**Response:**

10           The primary reference cited by the Examiner (Swartz et al.) is directed toward "a portable computer or data input system, typically including an optical scanner, wherein the system is incorporated into a glove worn by the system operator." (Col.1, lines 20-24). Disclosed is  
15           a portable, hand-held keyboard and bar code scanning system.

          On the other hand, the present invention relates to "a key switch system for switching between a plurality of mutually incompatible wireless communication apparatuses installed on a computer for the purpose of avoiding  
20           interference" (Page 1, lines 9-12).

          MPEP 2141.01(a) states that the reference must either be in the field of the applicant's disclosure or at least  
25           be reasonably pertinent to the particular problem with which the inventor was concerned. It is difficult to understand how one of ordinary skill in the art searching for a means of switching between incompatible wireless communication protocols would have logically attended to the use of a  
30           keyboard in the cited reference when the cited reference discloses a portable scanning device incorporated into a glove and is described as such, claimed as such, structured

as such, and categorized as such by the USPTO. Although the cited prior art does include the possibility of wirelessly transmitting data to/from a host computer system, there is a total absence of any stated or inherent suggestion addressing the particular problem with which the present inventor was concerned.

For the reference to have even considered the use of two or more communication protocols, which it does not, would have opened up the incompatibility problem and changed the intended nature of the invention. The cited reference deals with the problem of providing the convenience of a portable, hand-held optical scanner and input system. On the other hand, the present invention pertains to solving the problem of permitting incompatible wireless communication protocols in computers whose users desire access to each of the differing protocols at different times.

Therefore, the Applicant wishes to state for the record that the primary reference appears to be in a nonanalogous art and as such may not be available as a reference. However, without disclaimer of any kind regarding the availability of the reference and to cooperate with the Examiner to the maximum extent, the Applicant now intends to show differences between the present invention and the arts suggested as relevant in this Office action.

The passage of Swartz et al. cited by the Examiner disclosing "repeated activation of one of the four function keys might cycle the keyboard 13 through a numeric mode and one or more alphabetic modes" is provided to "increase the functionality of the limited keyset". This allows the

keyset to "emulate the number pad on a computer" and "each alphabetic mode might emulate a segment on an alphabetic keyset" (Col.5, lines 29-44). The Applicant is unable to find any teachings of the cycle including a mode where the keyboard is disabled. Nor are there any indications that such a mode necessarily be present in the input system of Swartz, a requirement for inherency (MPEP 2112). Nor are there any indications that such a mode would be desired or obvious when "control switch 14 is mounted on the finger brace 15 so that it can be manipulated easily by the thumb of the system operator." (Col.3, lines 52-55).

Independent claims 1 and 11 both comprise the limitation that the cyclic pattern comprises simultaneous deactivation of all of the plurality of wireless communication apparatuses. This is not found or made obvious by the prior art and provides the advantages of power savings and prevention of accidental interfering with other wireless communications devices or in situations where wireless communications are not permitted.

Furthermore, Figs.1 and 2 and Col. 6, lines 49-53 of the disclosure of Vaisanen et al. teach that "Simultaneous operation is limited to the receive (rx) mode of the WLAN radio (WLAN module) 11 when the BT radio (BT module) is operational, either in the receive (rx) or the transmit (tx) mode, in order to protect the BT transceiver from permanent damage." Vaisanen et al. thus teaches more than one wireless communication apparatus being activated at the same time for the purpose of monitoring the "preferred" WLAN communication linkage while the bluetooth radio is in use (Col.5, 17-22).

On the other hand, independent claims 1 and 11 both comprise the limitation that a maximum of one of the wireless communication apparatuses is activated at any one time. This limitation is clearly supported by Fig.2 and Page 5, lines 15-27 and obviously completely eliminates any possibility of one wireless communications system interfering with another wireless communications system within the same computer.

It is not obvious to alter the teachings of Vaisanen et al. to meet the present invention's limitation of "a maximum of one" of the wireless communication apparatuses being activated at any one time because to do so changes the principle of operation of the reference device and is therefore not obvious(MPEP 2141.01).

Col.7, lines 25-46 and Fig.5 clearly describe the use of the input system of Swartz et al. Disclosed are base stations 53 mounted on the ceiling to "facilitate easy low-power communication between the base station 53 and the operators 52." Also stated is that direct communications between the portable terminals and the host computer 55 can be carried out, but that inventory or other obstacles could make complete transmission of data problematic. When combined with the fact that Swartz et al. is strongly motivated to minimize the components of the input system (Col.7, lines 54-55), it seems clear that only a single type of spread spectrum wireless transceiver (Col.6, lines 13-18) is taught or suggested.

In the absence of hind sight afforded by the present

invention (MPEP 2141), it is difficult for the Applicant to understand why one skilled in the art would be motivated to combine the inventions of Swart et al. and Vaisanen et al. in order to "effect a substantially interference-free switching circuitry for sharing a pair of diversity antennae in a multi-transceiver mobile terminal" as suggested by the Examiner.

If Swartz et al. teaches the use of a single type of spread spectrum wireless communication module, there is no need or motivation to incorporate switching circuitry for a multi-transceiver sharing a pair of diversity antennae. To do so would merely be solving a problem that did not exist before the unnecessary introduction of the multi-transceiver. Added costs, complexity, and size would be the only "benefit".

In addition, claims 3 and 12 have been amended to include software implementing one present invention method of switching from one cyclic state to another supported by Fig.3 and Page 6, lines 21-33. Claims 4 and 13 have been amended to include software implementing another present invention method of switching from one cyclic state to another supported by Fig.4 and Page 7, lines 10-19. No new material has been introduced. None of the cited prior arts appears to comprise software meeting these claims.

For at least these reasons, the Applicant believes that the present application as claimed discloses a new and useful device not taught or made obvious by the prior art. Therefore, reconsideration and allowance of claims 1-17 is respectfully requested.

Winston Hsu Date: 4/16/2004

Winston Hsu, Patent Agent No. 41,526

5 P.O. BOX 506

Merrifield, VA 22116

U.S.A.

e-mail: winstonhsu@naipo.com.tw

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Attachments : Replacement Sheet

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